

1. A container transportation system comprising:

a plurality of containers adapted to contain freight and protect freight in a marine environment;

5 a vehicle adapted to lift, transport, orient and place said containers on a support surface;

a marine vessel having a container storage deck with sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers; and

10 sufficient strength to support ~~said vehicle~~ when said vehicle is transporting a fully loaded one of said containers, and having sufficient length such that an angle of inclination of said ramp suspended between said deck and an associated dock allows said vehicle to traverse said ramp without slipping, whereby said vehicle is able to transport said containers from an associated dock, over said ramp, to desired locations on said deck for transportation by said marine vessel, and to remove said containers from said location on said deck and transport said containers over said ramp to an associated dock.

15 2. The system of claim 1 wherein said deck and said containers are adapted to be engaged by semiautomatic twistlocks, and said system further comprises a plurality of semiautomatic twistlocks connecting said containers to said deck at said desired locations.

3. The system of claim 2 wherein said vehicle stacks said containers in a vertical stack on said deck; and said twistlocks connect said containers to each other in said vertical stack.

4. The system of claim 1 wherein said ramp includes a main section and a foot pivotably attached to an end of said main section to contact an associated dock.

5. The system of claim 4 wherein said main section includes a downwardly depending lip attached to an end thereof opposite said foot; and said deck includes a longitudinally extending rail shaped to be engaged by said lip.

6. The system of claim 4 wherein said foot includes an upper surface having sufficient strength to support said vehicle carrying a loaded container and being inclined sufficiently to provide a smooth transition from said dock to said main section.

7. The system of claim 1 wherein said vessel has a sufficient beam dimension to enable said vehicle to transport said containers on said deck without said vessel listing more than a selected number of degrees. 12

8. The system of claim 1 wherein said containers are 53 feet in length, 8.5 feet in width and 9.5 feet in height and constructed of aluminum so as to maximize their cargo capacity.

9. The system of claim 8 wherein said containers are stacked on said deck in vertical stacks separated approximately 2 feet lengthwise and 3 inches widthwise.

10. The system of claim 1 wherein said vessel includes a pointed bow.

11. The system of claim 1 wherein said vehicle is a reach stacker.

12. A container transportation system comprising:

a plurality of containers adapted to contain freight and protect freight in a marine environment, said containers being further adapted to be engaged by semiautomatic twistlocks;

5 a reach stacker adapted to lift, transport, orient and place said containers on a support surface;

10 a marine vessel having a container storage deck with sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers, said deck being adapted to be engaged by automatic twistlocks and including a longitudinally extending rail;

15 a ramp shaped to extend from an associated dock to said deck and having sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers, and having sufficient length such that an angle of inclination of said ramp suspended between said deck and an associated dock allows said vehicle to traverse said ramp without slipping, whereby said vehicle is able to transport said containers from an associated dock, over said ramp, to desired locations on said deck for transportation by said marine vessel, and to remove said containers from said location on said deck and transport said containers over said ramp to an associated dock, said ramp including a main section, a foot pivotably attached to an end of said main section to contact an associated dock, and a downwardly depending lip attached to an end of said main section opposite said foot and shaped to engage said rail, said foot including an upper surface having sufficient strength to support said vehicle carrying a loaded container and being inclined sufficiently to provide a smooth transition from said dock to said main section;

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25 a plurality of semiautomatic twistlocks connecting said containers to said deck at said desired locations, and connecting said containers to each other in vertical stacks;

said vessel having a sufficient beam dimension to enable said vehicle to transport said containers on said deck without said vessel listing more than a selected number of degrees. 102

13. The system of claim 12 wherein said containers are 53 feet in length, 8.5 feet in width and 9.5 feet in height and constructed of aluminum so as to maximize their cargo capacity.

14. The system of claim 12 wherein said containers are stacked on said deck in vertical stacks separated approximately 2 feet lengthwise and 3 inches widthwise.

15. The system of claim 12 wherein said vessel includes a pointed bow.

16. A method of loading containers on a marine vessel comprising the steps of: selecting a plurality of containers adapted to contain and protect freight in a marine environment;

individually by means of a vehicle ~~said containers~~ such that the vehicle entirely supports each said container

lifting and transporting said containers by means of a vehicle over a ramp to a ~~said vehicle passing over said ramp and onto said deck and~~
5 storage deck of a marine vessel, said ramp and storage deck having sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers;

individually and releasing each container ~~positioning said containers at desired locations on said deck by means of said vehicle for transportation by said marine vessel; and~~

10 ~~securing said containers to said deck at said locations.~~

17. The method of claim 16 wherein said securing step includes securing said containers to said deck by semiautomatic twistlocks.

✓ 18. The method of claim 17 wherein said positioning step includes the step of arranging said containers in vertical stacks on said deck.

✓ 19. The method of claim 18 wherein said securing step includes the step of securing said containers in vertical stacks to each other by means of semiautomatic twistlocks.

20. The method of claim 16 further comprising the step of towing said marine vessel with said containers secured to said deck thereof from a loading site to a destination site.

✓ 21. The method of claim ²⁵ ~~20~~ further comprising the step of offloading said containers from said vessel at said destination site by a reach stacker vehicle.

22. A method of offloading containers from a marine vessel comprising the steps of: selecting a plurality of containers adapted to contain and protect freight in a marine environment located on a deck of a marine vessel; ^{No Ramp} lifting and transporting ~~said containers~~ ^{each container} by means of a vehicle over a ramp from a ^{comf} storage deck of a marine vessel, said ramp and storage deck having sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers; placing ^{each container} ~~said containers~~ at desired locations on an associated dock by said vehicle.

✓ 23. The method of claim 22 further comprising the step of, prior to said lifting step, securing a ramp to a longitudinal rail on said vessel to extend to an associated dock.

24. A method of ^{transporting} ~~loading~~ containers ^{by} on a marine vessel comprising the steps of:

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selecting a plurality of containers adapted to contain and protect freight in a marine environment; *individually* lifting and transporting *each container* said containers by means of a vehicle over a ramp to a storage deck of a marine vessel, said ramp and storage deck having sufficient strength to support said vehicle when said vehicle is transporting a fully loaded one of said containers;

positioning said containers in vertical stacks at desired locations on said deck by means of said vehicle for transportation by said marine vessel, and securing said containers in vertical stacks to each other by means of semiautomatic twistlocks; securing said containers to said deck at said locations by semiautomatic twistlocks;

→ towing said marine vessel with said containers secured to said deck thereof from a loading site to a destination site; and

offloading said containers from said vessel at said destination site by a reach stacker vehicle.

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